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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

BELL, CORY C

ART UNIT PAPER NUMBER

2164

DATE MAILED: 08/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/791,041

Applicant(s)

BJORNER, NIKOLAJ S.

Examiner

Cory C. Bell

Art Unit

2164

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15, 20 and 21 is/are rejected.
- 7) ☒ Claim(s) 16-19 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


SAM RIMELL
PRIMARY EXAMINER

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

1. Claims 1-21 have been examined.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 195 and 405. Page 11 also references computer 20 which cannot be found in the drawing. It is also believed that the missing reference numeral 195 is the result of a typo on page 11 referring to output peripheral interface as character 190 instead of 195. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

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4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-12 are rejected as claim 1 contains two periods, making the end of the claim unclear.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-12 are rejected as being non-statutory claims, as a computer-readable medium is defined in the specification to include non-tangible mediums. See excerpt bellow with emphasis added:

“Computer-readable media can be any available media that can be accessed by the computer 110 and includes both volatile and nonvolatile media, and removable and non-removable media. By way of example, and not limitation, computer-readable media may comprise computer storage media and **communication media**. Computer storage media includes both volatile and nonvolatile, removable and non-removable media implemented in any method or technology for storage of information such as computer-readable instructions, data structures, program modules, or other data. Computer storage media includes, but is not limited to, RAM, ROM, EEPROM, flash memory or other memory technology, CD-ROM, digital versatile disks (DVD) or other optical disk storage, magnetic cassettes, magnetic tape, magnetic disk storage or other magnetic storage devices, or any other medium which can be used to store the desired information and which can accessed by the computer 110. Communication media typically embodies computer-

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readable instructions, data structures, program modules, or other data in a **modulated data signal such as a carrier wave or other transport mechanism and includes any information delivery media. The term "modulated data signal" means a signal that has one or more of its characteristics set or changed in such a manner as to encode information in the signal. By way of example, and not limitation, communication media includes wired media such as a wired network or direct-wired connection, and wireless media such as acoustic, RF, infrared and other wireless media. Combinations of the any of the above should also be included within the scope of computer-readable media."**

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-4, 9, 13-15, and 20-21 are rejected under 35 U.S.C. 102(b) as being anticipated by US 6317754, known hereafter as Peng.

a. *As per Claim 1, A computer-readable medium having computer-executable instructions, comprising: transmitting an interval vector from a first member of a replica set to a second member of the replica set,(Figure 7) the interval vector comprising one or more intervals of versions, each interval having an upper bound and a lower bound(Col 16 lines 46-52, and Col 12 lines 42-55) determining which resources are out-of-sync between the members via the interval vector;(Col 3 lines 27-31) synchronizing at least*

one of the out-of-sync resources;(Figure 7) updating the interval vector to indicate that the at least one of the out-of-sync resources is synchronized.(Col 6 lines 54-63)

b. *As per Claim 2, The computer-readable medium of claim 1, wherein determining which resources are out of sync comprises finding resources on the second member, each found resource having a version not contained in the intervals of the interval vector. (Col 12 lines 1-10)*

c. *As per Claim 3, The computer-readable medium of claim 2, wherein a version is not contained in the interval vector if none of the intervals in the interval vector include the version. (Col 12 lines 1-10)*

d. *As per Claim 4, The computer-readable medium of claim 1, wherein each version is a number. (Col 16 lines 23-25)*

e. *As per Claim 9, The computer-readable medium of claim 1, further comprising transmitting another interval vector from the second member of the replica set to the first member of the replica set, the other interval vector serving to distinguish updates from conflicts. (Col 12 lines 11-35)*

f. *As per Claim 13, An apparatus for replicating resources, comprising: storage arranged to store the resources, each resource associated with a version; storage arranged to store an interval vector, the interval vector comprising one or more intervals of versions, each interval having an upper bound and a lower bound; a communications mechanism arranged to transmit the interval vector and to receive updates in response thereto, wherein determining whether to update a resource comprises finding that the*

version associated with the resource is not included in any of the intervals of the interval vector. See Claim 1 rejection and figure 9

g. *As per Claim 14, The apparatus of claim 13, wherein one of the updates comprises a deletion of a resource.* (Col 5 lines 32-35).

h. *As per Claim 15, The apparatus of claim 13, wherein one of the updates comprises a modification of a resource.* Col 3 lines 15-20, any file that is updated has been modified.

i. *As per Claim 20, A system for replicating resources, comprising: a first member arranged to participate in a replica set, (Figure 7) the first member having an interval vector that includes at least two intervals, each interval having an upper bound and a lower bound; (Col 16 lines 46-52, and Col 12 lines 42-55) and a second member arranged to participate in the replica set, (Figure 7) wherein the first member is arranged to perform acts, comprising: transmitting the interval vector to the second member (Figure 7) and updating the interval vector based on resources received from the second member, (Col 6 lines 54-63) and wherein the second member is arranged to perform acts, comprising: receiving the first interval vector; (Figure 7) determining which versions of resources the first member is missing by finding versions of the resources on the second member that are not included in any interval of the interval vector; (Col 12 lines 1-10) and sending at least one of the resources that has a version that is missing to the first member.* (Figure 7)

j. *As per Claim 21, The system of claim 20, wherein each resource comprises a file.* (Col 3 lines 5-8, a document is a file)

Allowable Subject Matter


Claims 16-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cory C. Bell whose telephone number is (571) 272 2736. The examiner can normally be reached on m-f 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571) 272 4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


SAM RIMELL
PRIMARY EXAMINER